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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/843,919	04/30/2001	Sadao Nishibori	15238.0009US01	9911
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EXAMINER				
COLE, ELIZABETH M				
ART UNIT		PAPER NUMBER		
1782				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/843,919

Applicant(s)

NISHIBORI ET AL.

Examiner

Elizabeth M. Cole

Art Unit

1782

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 5, 10, 13, 15, 22, 26, 27, 31, 34, 38, 39, 43, 44, 48-51, 57 and 61-63 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 5, 10, 13, 15, 22, 26, 27, 31, 34, 38, 39, 43, 44, 48-51, 57 and 61-63 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 3/12/10
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 5, 13, 15, 22, 26-27, 31, 34, 38-39, 43-44, 48, 57, 61-63 rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al, U.S. Patent No. 5,972,463 in view of Kargol et al, U.S. patent No. 5,492,662 for the reasons set forth in the previous action, and further in view of Hazelton et al, U.S. Patent No. 4,804,577. Martin et al discloses open, nonwoven webs made from thermoplastic filaments (col. 1, lines 8-17). The nonwoven material finds use as, among other things, a cushioning web, (col. 7, lin1). The web may be made from helically shaped or coiled filaments, (figure 4), interengaged into a desired ordered or random pattern to a desired web weight (column 7, line 51 --column 8, line 2). The filaments are made from a mixture of polymers. Examples of the polymers include polyolefins, such as polyethylene and polypropylene, and ethylene vinyl acetate (column 17, lines 31-64). A blend of polyethylene and/or polypropylene with poly (vinyl acetate) is also disclosed. The substrate can be embossed, thus creating an increase in bulk density in the width direction at spaced intervals of length (Figure 24 and column 20, lines 35-62). Martin et al. fail to disclose the nonwoven to have a uniform thickness when made with varying density. Kargol et al. disclose a cushion material made from polymeric fibers with varying zones of density (Abstract). Kargol et al. disclose that using their method for forming a cushion creates a material superior in comfort and

durability (column 5, lines 47-49). It would have been obvious to one having ordinary skill in the art to use the method of providing varying density disclosed by Kargol et al. in the nonwoven of Martin et al. in order to make a more comfortable cushion. Although the mold of Kargol et al. displayed in the figures does not give a nonwoven with a uniform thickness because, Kargol et al. disclose that the dimensions of the mold cavity may be altered and such alterations can easily be determined by one of skill in the art (column 21 lines 6-9). In Figures 3-5, the cushion created by Kargol et al. is not uniformly thick because it is being used to create a car seat (See Figure 5). However, a person of ordinary skill in the art might not want such a particularized end usage to the product, and Kargol et al. teach using a mold cavity of any desired shape for the end product (column 6, lines 5-10). It would have been obvious to one having ordinary skill in the art to form a nonwoven with a uniform thickness in order to create a cushion pad not having a particularized end usage, as taught to be known by Kargol et al.

Both Martin et al. (Figure 24) and Kargol et al. (Figure 4) disclose areas of low density and areas of high density. With regard to claim 5, Martin et al. disclose the ethylene-vinyl acetate can be used as the low melting component (b) and that polypropylene can be used as the higher melting component (a) (column 18, lines 31-36). However, Martin et al. do not disclose how much of the fiber is made of component (a) and how much is made of component (b). Martin et al. do teach that component (a) provides the structural role in the fibrous material, whereas component (b) provides an adhesive function to the web (column 23, lines 35-54). Since the material of Martin et al. is used as an abrasive article or cushioning material, it

would likely be inherent for the fibers of the nonwoven to comprise 70 to 97% polyolefin for structure and 3 to 30% EVA for bonding. If not inherent, it would have been obvious to a person having ordinary skill in the art to create the nonwoven web of Martin et al. with a higher ratio of structural material and lower level of bonding material in order to provide a rigid web material with a sufficient amount of bonding agent, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. With regard to claims 13-16, Martin et al. disclose the filaments to have a diameter of 0.5 to 25 mm (column 4, lines 52-61). With regard to claims 22 and 26 and 34 and 38, neither Martin et al. nor Kargol et al. disclose the bulk density of the nonwoven Web. Martin et al. do teach the bulk density or void volume can be varied (column 13, lines 55-63) and Kargol et al. teach that desired densities are obtained by adjusting the amount of fibers placed within any given zone of the mold (column 2, lines 10-18). Thus, altering the density would be result effective variable that that is adjusted by changing the amount of fiber used in the mold. Absent any unexpected results that arrive from using the claimed densities, it would have been obvious to a person having ordinary skill in the art to make the nonwoven web have a density within the claimed ranges, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. With regard to claim 27, the web material of Martin et al. (column 7, line 1) and Kargol et al. (column 5, line 47) may be used as a cushioning web. Martin et al. disclose the web can be made from hollow filaments (column 5, lines 22-24). Therefore, a web

made in this embodiment would have from 50 to 100% hollow filaments. With regard to claims 57 and 61, Martin et al. discloses using both hollow and solid filaments (column 5, line 23). It would have been obvious to one having ordinary skill in the art to provide hollow filaments for lower weight to the nonwoven web surrounded by solid filaments to provide structural integrity to the corresponding hollow filaments. With regard to claim 62, forming the differing areas of bulk density by changing take-off speed is a processing limitation. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." Although Kargol et al provide the different densities by use of a different method, the final product would still meet the claimed product limitations because areas of low and high density are formed. Martin et al differs from the claimed invention because Martin generally employs fibers which have a sheath/core or side-by-side configuration, while the instant claims recite a "single component" structure, which is interpreted as a blend of polymers, although it does teach forming blends and multi-constituent fibers generally. Hazelton et al teaches that nonwoven fabrics with improved extensibility, texture and hand can be formed by employing fibers which are a blend of a polymer such as a polyolefin or a styrene butadiene styrene with another polymer such as a vinyl acetate polymer. See abstract and col. 2, line 45 – col. 3, line 51. Therefore, it would have been obvious to have employed fibers having a blended

structure as the multi constituent fibers of Martin, motivated by the teaching of Hazelton, that using the blended fibers improved the extensibility, texture and hand of the resulting fabric.

3. With regard to the particularly claimed density, since Martin et al teaches that the bulk density or void volume can be varied at col. 13, lines 55-63 and Kargol et al teach that the desired density can be obtained by adjusting the amount of fibers placed within any given zone of the mold, (col. 2, lines 10-18), altering the density would be a result effective variable that can be adjusted by changing the amount of fiber used in the mold, and therefore, absent any unexpected results, it would have been obvious to one of ordinary skill in the art to have made the nonwoven web having a density within the claimed ranges, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. With regard to the limitation regarding the hollow filaments, Martin teaches that the web can be made from hollow filaments.

4. Claims 10, 49-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al in view of Kargol and Hazelton as applied to claims above, and further in view of Insley et al, U.S. Patent No. 5,451,437 as set forth in the previous action.

5. Applicant's arguments filed 4/16/10 have been fully considered but they are not persuasive.

6. Applicant's amendment has overcome the 112 rejections previously set forth.

7. Applicant argues that none of the art teaches filaments formed from a blend of two polymers including a polyolefin resin and one of either of vinyl acetate resin, ethylene vinyl acetate copolymer or styrene butadiene styrene as set forth in claim 1, or an essentially uniform blend of the two polymers as set forth in claim 63. However, the claims as currently written recite that the filaments are made of a blend of two polymers. The phrase "made of" is construed as open language and does not preclude the presence of additional polymers. If the phrase "consisting of" were substituted for "made of", the claims would be allowable. However, Hazelton teaches employing a blend and Martin teaches bi component fibers wherein one component can be a blend. Therefore, without limiting the claims to one wherein the fibers consist of the two polymers, the combination of Martin and Hazelton teaches the claimed invention.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571) 272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

The examiner's supervisor Rena Dye may be reached at (571) 272-3186.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The fax number for all official faxes is (571) 273-8300.

/Elizabeth M. Cole/
Primary Examiner, Art Unit 1782

e.m.c